

CLAIMS

1. A method of automatically deploying an application across a distributed computing domain including a plurality of processing devices, the method comprising:

(a) automatically scanning for an undeployed application stored in an application directory accessible to at least one of the plurality of processing devices;

(b) recognizing an undeployed application in the application directory; and

(c) deploying the undeployed application to a selected portion of the plurality of processing devices, such that the application is capable of being executed by the portion of the plurality of processing devices.

2. The method of Claim 1, wherein the method further comprises the steps of:

(a1) obtaining a list of applications stored in the application directory;

(b1) comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

(c1) deploying the selected application to the selected portion of the

plurality of processing devices.

3. The method of Claim 2, wherein the method further comprises the step of:

(b2) selecting the application to be deployed from the list of applications stored in the application directory when the application is absent from the list of previously deployed applications.

4. The method of Claim 2, wherein the method further comprises the step of:

(b2) selecting the application to be deployed from the list of applications stored in the application directory when the value of a deployment indicator associated with the application differs from the value of a deployment indicator recorded on the list of previously deployed applications.

5. The method of Claim 4, wherein:

the deployment indicator is an attribute of a file containing the application.

6. The method of Claim 5, wherein:

the attribute of the file containing the application is the date of the file.

7. The method of Claim 4, wherein:
the deployment indicator is an attribute of a file associated with at least one separate file containing the application.
8. The method of Claim 7, wherein:
the attribute of the file associated with at least one separate file containing the application is the date of the file.
9. The method of Claim 2, wherein:
the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.
10. The method of Claim 9, wherein:
the plurality of attributes associated with the undeployed application are contained in a deployment descriptor.
11. The method of Claim 9, wherein:
the plurality of attributes associated with the distributed computing domain are contained in a configuration file.
12. The method of Claim 9, wherein:

the plurality of attributes associated with the undeployed application and with the distributed computing domain are expressed as a plurality of Extensible Markup Language (XML) tags.

13. The method of Claim 1, wherein:

the step of scanning is initiated periodically after the passage of a predetermined time interval.

14. The method of Claim 1, wherein:

the undeployed application is comprised of a plurality of application components contained in a single file.

15. The method of Claim 1, wherein:

the undeployed application is comprised of a plurality of application components each contained in a separate file.

16. The method of Claim 1, wherein:

the undeployed application is a J2EE application.

17. The method of Claim 1, wherein:

the application directory is stored in a non-volatile information storage device.

18. The method of Claim 1, wherein:

the list of previously deployed applications is stored in a memory device accessible to at least one of the plurality of processing devices.

19. A method of automatically maintaining an application object across a distributed computing domain, the application object contained within at least one application file and the distributed computing domain including a plurality of processing devices, the method comprising the steps:

- (a) retrieving a list of all of the application files located within an application directory;
- (b) comparing the list of all of the files located within an application directory to a list of all of the files associated with previously deployed application objects;
- (c) for each application file, deploying the application object contained in the application file when the application file is absent from the list of all the files associated with previously deployed application objects;
- (d) for each application file, redeploying the application object contained in the application file when the application file differs from the corresponding file on the list of all of the files associated with previously deployed application objects; and

(e) for each application file on the list of all of the files associated with previously deployed application objects, undeploying the application object associated with an application file when the application file on the list of all of the files associated with previously deployed application objects is absent from the list of all of the application files located within the application directory.

20. The method of Claim 19, wherein:

in the step of redeploying, the difference is determined by comparing the value of a deployment indicator associated with an application file with the value of a deployment indicator recorded on the list of previously deployed application objects.

21. The method of Claim 20, wherein:

the deployment indicator is an attribute of a file containing the application object.

22. The method of Claim 21, wherein:

the attribute of the file containing the application object is the date of the file.

23. The method of Claim 20, wherein:

the deployment indicator is an attribute of a file associated with at least

one separate file containing the application object.

24. The method of Claim 23, wherein:

the attribute of the file associated with at least one separate file containing the application object is the date of the file.

25. The method of Claim 19, wherein:

the step of retrieving is initiated periodically after the passage of a predetermined time interval.

26. The method of Claim 19, wherein:

the application object is a J2EE application.

27. The method of Claim 19, wherein:

the application object is a J2EE Enterprise Bean.

28. The method of Claim 19, wherein:

the application object is a Web component.

29. The method of Claim 19, wherein:

the application directory is stored in a non-volatile information storage device.

30. The method of Claim 19, wherein:

the list of all of the files associated with previously deployed application objects is stored in a memory device accessible to at least one of the plurality of processing devices.

31. A method of automatically maintaining an application object across a distributed computing domain including a plurality of processing devices, the method comprising:

(a) automatically scanning an application directory to create a list of application objects located in the application directory;

(b) comparing the list of application objects to a list of previously deployed application objects to find a previously deployed application object corresponding to each application object in the application directory; and

(c) generating a response to the step of comparing, wherein the response is selected from the group comprising:

deploying the application object to a selected portion of the plurality of processing devices when the application object is absent from the list of previously deployed application objects;

redeploying the application object to the selected portion of the plurality of processing devices when the application object in the application directory is more recent than the corresponding application object on the list of previously deployed application objects; or

undeploying the application object when the application object on the list of previously deployed application objects is absent from the list of

application objects located in application directory.

32. The method of Claim 31, wherein:

the application object is a J2EE application.

33. The method of Claim 31, wherein:

the application object is a J2EE Enterprise Bean.

34. The method of Claim 31, wherein:

the application object is a Web component.

35. The method of Claim 31, wherein:

the application directory is stored in a non-volatile information storage device.

36. The method of Claim 31, wherein:

the list of previously deployed application objects is stored in a memory device accessible to at least one of the plurality of processing devices.

37. An article of manufacture including an information storage medium wherein is stored information, the information comprising:

a group of processor readable instructions adapted to operate on a processing device, wherein the group of processor readable instructions are adapted to operate the processing device according to the method of Claim 1.

38. An article of manufacture including an information storage medium wherein is stored information, the information comprising:

a group of processor readable instructions adapted to operate the processing device according to the method of Claim 19.

39. An article of manufacture including an information storage medium wherein is stored information, the information comprising:

a group of processor readable instructions adapted to operate the processing device according to the method of Claim 31.

40. A processing system including at least a first processing device and a memory device accessible by the first processing device, the processing system comprising:

a group of processor readable instructions stored in the memory device and operating the first processing device to perform a group of steps including:

(a) automatically scanning for an undeployed application stored in an application directory accessible to first processing device;

(b) recognizing an undeployed application in the application directory; and

(c) deploying the undeployed application to a selected portion of the processing system, such that the application is capable of being executed by the portion of the processing system.

41. The processing system of Claim 40, wherein:
the selected portion of the processing system includes the first processing device.
42. The processing system of Claim 40, further including a second processing device in communication with the first processing device, wherein:
the selected portion of the processing system includes the second processing device.
43. The processing system of Claim 42, wherein:
the first processing device and the second processing device are located on a first computer.
44. The processing system of Claim 43, wherein:
the first processing device is located on a first computer; and
the second processing device is located on a second computer.
45. A processing system including at least a first processing device and a memory device accessible by the first processing device, the processing system comprising:
a group of processor readable instructions stored in the memory device and operating the first processing device to perform a group of steps including:

- (a) retrieving a list of all of the application files located within an application directory;
- (b) comparing the list of all of the files located within an application directory to a list of all of the files associated with previously deployed application objects;
- (c) for each application file, deploying the application object contained in the application file when the application file is absent from the list of all the files associated with previously deployed application objects;
- (d) for each application file, redeploying the application object contained in the application file when the application file differs from the corresponding file on the list of all of the files associated with previously deployed application objects; and
- (e) for each application file on the list of all of the files associated with previously deployed application objects, undeploying the application object associated with an application file when the application file on the list of all of the files associated with previously deployed application objects is absent from the list of all of the application files located within the application directory.

46. The processing system of Claim 45, wherein:
the application object is deployed on the first processing device.
47. The processing system of Claim 45, further including a second processing device in communication with the first processing device, wherein:
the application object is deployed on the second processing device.
48. The processing system of Claim 47, wherein:
the first processing device and the second processing device are located on a first computer.
49. The processing system of Claim 47, wherein:
the first processing device is located on a first computer; and
the second processing device is located on a second computer.
50. A processing system including at least a first processing device and a memory device accessible by the first processing device, the processing system comprising:
a group of processor readable instructions stored in the memory device and operating the first processing device to perform a group of steps including:
(a) automatically scanning an application directory to create a list of application objects located in the application directory;

(b) comparing the list of application objects to a list of previously deployed application objects to find a previously deployed application object corresponding to each application object in the application directory; and

(c) generating a response to the step of comparing, wherein the response is selected from the group comprising:

deploying the application object to a selected portion of the plurality of processing devices when the application object is absent from the list of previously deployed application objects;

redeploying the application object to the selected portion of the plurality of processing devices when the application object in the application directory is more recent than the corresponding application object on the list of previously deployed application objects; or

undeploying the application object when the application object on the list of previously deployed application objects is absent from the list of application objects located in application directory.

51. The processing system of Claim 50, wherein:

the application object is deployed on the first processing device.

52. The processing system of Claim 50, further including a second processing device in communication with the first processing device, wherein:

the application object is deployed on the second processing device.

53. The processing system of Claim 52, wherein:
- the first processing device and the second processing device are located on a first computer.
54. The processing system of Claim 52, wherein:
- the first processing device is located on a first computer; and
- the second processing device is located on a second computer.